UNITED STATES PATENT AND TRADEMARK OFFICE

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ART UNIT	PAPER NUMBER
2168	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

    A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
 Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _31 October 2003_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-55_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-55_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response To Amendment

1.   This action is responsive to communication: Application, filed on 10/31/2003.

2.   Claim 39 has been amended.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign

country or in public use or on sale in this country, more than one year prior to the date

of application for patent in the United States.

4.   Claims 1-6, 21-23, 27-29, 30-35,39, 40-47, 51-55 are rejected under 35

U.S.C. 102(b) as being anticipated by Steven Kanefsky (U.S. Pub No. 2001/0044327)

hereinafter "Kanefsky".

For claim 1, Kanefsky teaches "a method for performing an operation on a hierarchical

data tree (See paragraph [0067-0074, fig. 4&5]), comprising: visiting an anchor node

in the tree" (See paragraph [0067-0068, fig. 4]);

"retrieving data from the anchor node and a plurality of neighboring nodes each

potentially affected by the operation"(See paragraph [0020, 0067-0068, fig. 4,5&6]);

"querying a cache for a key representing the anchor node and the plurality of

neighboring nodes in a pre-operation condition based on the retrieved data, wherein

the cache stores pre-operation/post-operation data pairs"(See paragraph [0020-

0023,0032-0035])

"if the *query* finds a match, replacing the pre-operation retrieved data with cached

post-operation data" (See paragraph [0021-0022]); and

"if the query does not find a match, performing the operation on the pre-operation

retrieved data to generate post-operation data, replacing the pre-operation retrieved

data with the post-operation data and storing the post-operation data in the cache with

the associated pre-operation retrieved data"(See paragraph [0021-0022, 0038]).

For claim 2, Kanefsky teaches "wherein the retrieving data from the anchor node and

a plurality of neighboring nodes each potentially affected by the operation further

comprises retrieving data from at least one neighboring node affecting the

operation"(See paragraph [0037]).

For claim 3, Kanefsky teaches "wherein the pre-operation retrieved data is replaced

with cached post-operation data for a subset of the nodes for which pre-operation data

was retrieved" (See paragraph [0038, 0045]).

For claim 4, Kanefsky teaches "wherein the operation assigns the anchor node to one of a plurality of equivalence classes and maintains a count of the number of nodes in each of the plurality of equivalence classes"(See paragraph [0055-0056, fig.4]).

For claim 5, Kanefsky teaches "wherein the hierarchical data tree represents a physical structure and the operation comprises modifying the retrieved data to reflect the addition of material to the physical structure"(See paragraph [0058, fig. 4&5]).

For claim 6, Kanefsky teaches "wherein the hierarchical data tree represents a physical structure and the operation comprises modifying the retrieved data to reflect the removal of material from the physical structure" (See paragraph [0063-0064]).

For claim 21, Kanefsky teaches "expunging non-matched data from the cache when the cache attains a predetermined occupancy" (See paragraph [0060-0063])

For claim 22, Kanefsky teaches "wherein replacing the retrieved data with cached data comprises replacing the retrieved data with pointers to previously examined nodes represented by the cached data" (See paragraph [0037]).

For claim 23, Kanefsky teaches "wherein the data retrieval, cache querying and data replacement based on results of the cache querying is repeated with each unique node in the tree treated as anchor node" (See paragraph [0021-0022, 0038]).

For claim 27, Kanefsky teaches " a processing system for performing an operation on a hierarchical data tree"(See paragraph [0067-0074, fig. 4&5]), comprising;

"means for retrieving data from an anchor node in the tree and plurality of neighboring nodes affected by the operation" (See paragraph [0020, 0067-0068])

"means for querying a cache for key representative of the node and the plurality of neighboring nodes based on the retrieved data" (See paragraph [0021-0022])

"means for performing the operation on the retrieved data to generate post-operation data, replacing the retrieved data with the post-operation data and storing the post-operation data in the cache based on the key if the query does not find a match" (See paragraph[0021-0022, 0038])

For claims 28-29, 40-41, these claims have substantially the same limitation as claim 4. These limitations have already been addressed in the rejection of claim 4. Therefore, they are rejected on similar grounds corresponding to the arguments given to the rejected claim 4 above.

For claims 30 and 42, these claims have substantially the same limitation as claim 5. These limitations have already been addressed in the rejection of claim 5. Therefore, they are rejected on similar grounds corresponding to the arguments given to the rejected claim 5 above.

For claims 31 and 43, these claims have substantially the same limitation as claim 6. These limitations have already been addressed in the rejection of claim 6. Therefore, they are rejected on similar grounds corresponding to the arguments given to the rejected claim 6 above.

For claims 32 and 44, these claims have substantially the same limitation as claim 7. These limitations have already been addressed in the rejection of claim 7. Therefore, they are rejected on similar grounds corresponding to the arguments given to the rejected claim 7 above.

For claims 33 and 45 these claims have substantially the same limitation as claim 21. These limitations have already been addressed in the rejection of claim 21. Therefore, they are rejected on similar grounds corresponding to the arguments given to the rejected claim 21 above.

For claims 34 and 46, these claims have substantially the same limitation as claim 22. These limitations have already been addressed in the rejection of claim 22. Therefore, they are rejected on similar grounds corresponding to the arguments given to the rejected claim 22 above.

For claims 35 and 47, these claims have substantially the same limitation as claim 23. These limitations have already been addressed in the rejection of claim 23. Therefore,

they are rejected on similar grounds corresponding to the arguments given to the

rejected claim 23 above.

For claim 39, Kanefsky teaches a program product comprising; a computer-readable

storage medium "means recorded on a medium for retrieving data from an anchor node

in the tree and plurality of neighboring nodes affected by the operation" (See paragraph

[0020, 0067-0068])

"means recorded on a medium for querying a cache for key representative of the node

and the plurality of neighboring nodes based on the retrieved data" (See paragraph

[0021-0022])

"means recorded on a medium for performing the operation on the retrieved data to

generate post-operation data, replacing the retrieved data with the post-operation data

and storing the post-operation data in the cache based on the key if the query does not

find a match" (See paragraph[0021-0022, 0038])

For claim 51, Kanefsky teaches "wherein the storage medium is a magnetic recording

medium" (See paragraph [0045-0047])

For claim 52, Kanefsky teaches "wherein the storage medium is an optical recording

medium" (See paragraph [0045-0047])

For claim 53, Kanefsky teaches "wherein the storage medium is a network distribution

medium" (See paragraph [0045-0047])

For claim 54, Kanefsky teaches "a method for performing an operation on a

hierarchical data tree (See paragraph [0067-0074, fig. 4&5]), comprising: visiting an

anchor node in the tree" (See paragraph [0067-0068, fig. 4]);

"retrieving data from the anchor node and a plurality of neighboring nodes each

potentially affected by the operation"(See paragraph [0020, 0067-0068, fig. 4,5&6]);

"querying a cache for a key representing the anchor node and the plurality of

neighboring nodes based on the retrieved data" (See paragraph [0020-0023,0032-

0035])

"if the *query* finds a match, replacing the pre-operation retrieved data with cached

data " (See paragraph [0021-0022]); and

"if the query does not find a match, performing the operation on the retrieved data to

generate post-operation data, replacing the retrieved data with the post-operation data

and storing the post-operation data in the cache based key"(See paragraph [0031-

0022, 0038]).

For claim 55, Kanefsky teaches "wherein at least one of plurality retrieved neighboring

nodes each potentially affected by the operation is separated from the node by at least

one node" (See paragraph [0063-0064, 0067-0068]).

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or

described as set forth in section 102 of this title, if the differences between the subject

matter sought to be patented and the prior art are such that the subject matter as a

whole would have been obvious at the time the invention was made to a person having

ordinary skill in the art to which said subject matter pertains. Patentability shall not be

negatived by the manner in which the invention was made.

6.   Claims 7-10, 24-26, 36-38, 48-50 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Steven Kanefsky (U.S. Pub No. 2001/0044327) in the view of Hsiung

et al (Pat No U.S 6,865,509) hereinafter "Hsiung".

For claim 7, Kanefsky teaches the claim limitation but does not explicitly teach "wherein

the operation modifies a parameter of at least one of the anchor node and the plurality

of neighboring nodes"

However, Hsiung teaches "wherein the operation modifies a parameter of at least one

of the anchor node and the plurality of neighboring nodes" (Hsiung teaches processing

information or data over a network or computers, and also monitoring and controlling a

process using multi-dimensional data such as temperature, pressure [Col 1 - Col 2])

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Kanefsky with the teachings of Hsiung using sensors to monitor process parameters such as temperature, pressure, stress and the like. Whereby displays can generally outputs signals such as temperature in a graphical user interface form or numerical value in Celsius.

For claim 8, Kanefsky does not explicitly teach "wherein the parameter is a temperature of the at least one of the anchor node and the plurality of neighboring nodes".

However, Hsiung teaches "wherein the parameter is a temperature of the at least one of the anchor node and the plurality of neighboring nodes"(Col.1-2)

For claim 9, Kanefsky does not explicitly teach "wherein the parameter is a pressure of the at least one of the anchor node and the plurality of neighboring nodes".

However, Hsiung teaches "wherein the parameter is a pressure of the at least one of the anchor node and the plurality of neighboring nodes"(Col.1-2)

For claim 10, Kanefsky does not explicitly teach "wherein the parameter is a stress of the at least one of the anchor node and the plurality of neighboring nodes".

However, Hsiung teaches "wherein the parameter is a stress of the at least one of the anchor node and the plurality of neighboring nodes"(Col. 1-2)

For claim 24, Kanefsky teaches the claim limitation but does not explicitly

teaches "wherein the tree represents a microelectronic device".

However, Hsiung teaches "wherein the tree represents a microelectronic device"(Col.

15, lines 16-20).

For claim 25, Kanefsky does not explicitly teach "wherein the microelectronic

device is a MEMS device".

However, Hsiung teaches "wherein the microelectronic device is a MEMS device".

(Col. 15, lines 16-20).

For claim 26, Kanefsky does not explicitly teach "wherein the microelectronic device is

a NEMS device".

However, Hsiung teaches "wherein the microelectronic device is a MEMS device".

(Col. 15, lines 16-20).

For claims 36 and 48, these claims have substantially the same limitation as claim 24.

These limitations have already been addressed in the rejection of claim 24. Therefore,

they are rejected on similar grounds corresponding to the arguments given to the

rejected claim 24 above.

For claims 37 and 49, these claims have substantially the same limitation as claim 25.

These limitations have already been addressed in the rejection of claim 25. Therefore,

they are rejected on similar grounds corresponding to the arguments given to the

rejected claim 25 above.

For claims 38 and 50, these claims have substantially the same limitation as claim 26.

These limitations have already been addressed in the rejection of claim 26. Therefore,

they are rejected on similar grounds corresponding to the arguments given to the

rejected claim 26 above.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or

described as set forth in section 102 of this title, if the differences between the subject

matter sought to be patented and the prior art are such that the subject matter as a

whole would have been obvious at the time the invention was made to a person having

ordinary skill in the art to which said subject matter pertains. Patentability shall not be

negatived by the manner in which the invention was made.

8.   Claims 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Steven Kanefsky (U.S. Pub No. 2001/0044327) in view of Schreiber et al. (Pub No.

2002/0138353) hereinafter "Schreiber"

For claim 15, Kanefsky teaches the claim limitation but does not explicitly teach "wherein the tree is an X-dimensional·tree and the plurality of neighboring nodes includes at least X neighboring nodes".

However, Schreiber teaches "wherein the tree is an X-dimensional tree and the plurality of neighboring nodes includes at least X neighboring nodes". (multi-dimensional...three-dimensional cube see Schreiber fig. 7[sheet 5of 21] &fig.8B (sheet 6 of 21) & paragraph 0102-0103 & 0107-0110 &0016).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kanefsky's teachings by Schreiber, because using the arrangement of nodes with the combination of the tree having a X-dimensional region, would have given those skilled in the art the skills to effectively incorporate two/three/ X-dimensional region in a directed acyclic graph structure.

For claim 16, this claim has substantially the same limitation as claim 15. These limitations have already been addressed in the rejection of claim 15. Therefore, they are rejected on similar grounds corresponding to the arguments given to the rejected claim 15 above.

For claim 17 Kanefsky teaches the claim limitation but does not teach "wherein the tree has a directed acyclic graph structure".

However, Schreiber teaches "wherein the tree has a directed acyclic graph structure"(See paragraph [0060, 0069, 0072, 0087& fig. 3-6])

For claim 18, Kanefsky teaches the claim limitation but does not teach "wherein the tree is an octree".

However, Schreiber teaches "wherein the tree is an octree" (multi-dimensional...three-dimensional cube see Schreiber fig. 7[sheet 5of 21] &fig.8B (sheet 6 of 21) & paragraph 0102-0103 & 0107-0110 &0016).

For claim 19, Kanefsky teaches the claim limitation but does not teach "wherein the tree is a quadtree"

However, Schreiber teaches "wherein the tree is a quadtree" (multi-dimensional...three-dimensional cube see Schreiber fig. 7[sheet 5of 21] &fig.8B (sheet 6 of 21) & paragraph 0102-0103 & 0107-0110 &0016).

For claim 20, Kanefsky teaches the claim limitation but does not teach "wherein the tree is a shared tree".

However, Schreiber teaches "wherein the tree is a shared tree" (multi dimensional...three-dimensional cube see Schreiber fig. 7[sheet 5of 21] &fig.8B (sheet 6 of 21) & paragraph 0102-0103 & 0107-0110 &0016).

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or

described as set forth in section 102 of this title, if the differences between the subject

matter sought to be patented and the prior art are such that the subject matter as a

whole would have been obvious at the time the invention was made to a person having

ordinary skill in the art to which said subject matter pertains. Patentability shall not be

negatived by the manner in which the invention was made.

10.   Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Steven Kanefsky (U.S. Pub No. 2001/0044327) and Schreiber et al. (Pub No.

2002/0138353) hereinafter "Schreiber", in the view of Hsiung et al (Pat No U.S

6,865,509) hereinafter "Hsiung".

For claim 11, Kanefsky and Schreiber do not explicitly teach "wherein the parameter is

an equivalence class".

However Hsiung teaches "wherein the parameter is an equivalence class" (Col. 2,

lines50-57, Col. 3, lines 14-31, Col. 13, lines 49-67, Col. 14, lines 1-25, Col 14, lines

27-39, Col. 15, lines 9-20)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Kanefsky and Schreiber by the teachings of Hsiung above, because using the enhanced method and system of an arrangement of nodes in forming a directed acyclic graph with the representation of material composition of Hsiung would have given those skilled in the art the steps to effectively incorporate a material composition to the arrangement of nodes in forming a directed acyclic graph.

For claim 12, most of the limitation of this claim has been noted in the rejection of claim 1. In addition Kanefsky and Schreiber do not explicitly teach "wherein the parameter is a composition of the at least one of the anchor node and the plurality of neighboring nodes".

However, Hsiung teaches "wherein the parameter is a composition of the at least one of the anchor node and the plurality of neighboring nodes"(Col. 2, lines50-57, Col. 3, lines 14-31, Col. 13, lines 49-67, Col. 14, lines 1-25, Col 14, lines 27-39, Col. 15, lines 9-20)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Kanefsky and Schreiber by the teachings of Hsiung above, because using the enhanced method and system of an arrangement of nodes in forming a directed acyclic graph with the representation of material composition of Hsiung would have given those skilled in the art the steps to effectively incorporate a material composition to the arrangement of nodes in forming a directed acyclic graph.

For claim 13, Kanefsky and Schreiber do not explicitly teach "wherein the composition comprises a percentage of occupation of the at least one of the anchor node and the plurality of neighboring nodes by a predetermined material".

However, Hsiung teaches "wherein the composition comprises a percentage of occupation of the at least one of the anchor node and the plurality of neighboring nodes by a predetermined material"(Col. 2, lines50-57, Col. 3, lines 14-31, Col. 13, lines 49-67, Col. 14, lines 1-25, Col 14, lines 27-39, Col. 15, lines 9-20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have been motivated to modify the combination of Kanefsky and Schreiber per the above to effectively incorporate " a material composition" to the arrangement of nodes in forming a directed acyclic graph.

For claim 14, Kanefsky and Schreiber do not explicitly teach "wherein the composition comprises a percentage of occupation of the at least one of the anchor node and the plurality of neighboring nodes by each of a plurality of predetermined materials".

However, Hsiung teaches "wherein the composition comprises a percentage of occupation of the at least one of the anchor node and the plurality of neighboring nodes by each of a plurality of predetermined materials" (Col. 2, lines50-57, Col. 3, lines 14-31, Col. 13, lines 49-67, Col. 14, lines 1-25, Col 14, lines 27-39, Col. 15, lines 9-20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to modify the combination of Kanefsky and Schreiber per

the above to effectively incorporate " a material composition" to the arrangement of

nodes in forming a directed acyclic graph.

Response To Amendment

11.   As per claim 1, applicant argued that Kanefsky does not teaches "a method for

performing an operation on a hierarchical data tree, comprising: visiting an anchor

node in the tree, retrieving data from the anchor node and a plurality of neighboring

nodes each potentially affected by the operation, querying a cache for a key

representing the anchor node and the plurality of neighboring nodes in a pre-operation

condition based on the retrieved data, wherein the cache stores pre-operation/post-

operation data pairs, if the *query* finds a match, replacing the pre-operation retrieved

data with cached post-operation data and if the query does not find a match,

performing the operation on the pre-operation retrieved data to generate post-

operation data, replacing the pre-operation retrieved data with the post-operation data

and storing the post-operation data in the cache with the associated pre-operation

retrieved data. On the contrary Kanefsky teaches "a method for performing an

operation on a hierarchical data tree (See paragraph [0067-0074, fig. 4&5]),

comprising: visiting an anchor node in the tree" (See paragraph [0067-0068, fig. 4]);

"retrieving data from the anchor node and a plurality of neighboring nodes each

potentially affected by the operation"(See paragraph [0020, 0067-0068, fig. 4,5&6]);

"querying a cache for a key representing the anchor node and the plurality of

neighboring nodes in a pre-operation condition based on the retrieved data, wherein

the cache stores pre-operation/post-operation data pairs"(See paragraph [0020-

0023,0032-0035])

"if the *query* finds a match, replacing the pre-operation retrieved data with cached

post-operation data" (See paragraph [0021-0022]); and

"if the query does not find a match, performing the operation on the pre-operation

retrieved data to generate post-operation data, replacing the pre-operation retrieved

data with the post-operation data and storing the post-operation data in the cache with

the associated pre-operation retrieved data"(See paragraph [0021-0022, 0038]),

wherein Kanefsky's teachings include hierarchy of folders 420-428, wherein selecting

a folder, directs the user to other folders, also a users responds to the script 628

evokes a second operation such as providing customers with a number of other

option. Kanefsky's teachings also include the retrieval of data such as automobile

dealer, which is displayed when the a user selects an automobile item from the

second folder, which in turn brings up all the other related automobile folders

connected or neighboring folders to the second folder. Kanefsky also teaches at

paragraphs 0020-0023,0032-0035 the querying a cache for a key representing the

anchor node and the plurality of neighboring nodes in a pre-operation condition based

on the retrieved data, wherein the cache stores pre-operation/post-operation data

pairs. And also Kanefsky's teachings include at paragraphs 0021-0022, if the *query*

finds a match, replacing the pre-operation retrieved data with cached post-operation

data. Like wise at paragraphs 0021-0022, 0038 Kanefsky teaches, if the query does

not find a match, performing the operation on the pre-operation retrieved data to

generate post-operation data, replacing the pre-operation retrieved data with the post-

operation data and storing the post-operation data in the cache with the associated

pre-operation retrieved data. Thus teachings are synonymous.

As per claim 27, applicant argued Kanefsky does not teaches " a processing system for

performing an operation on a hierarchical data tree, means for retrieving data from an

anchor node in the tree and plurality of neighboring nodes affected by the operation,

means for querying a cache for key representative of the node and the plurality of

neighboring nodes based on the retrieved data, means for performing the operation on

the retrieved data to generate post-operation data, replacing the retrieved data with the

post-operation data and storing the post-operation data in the cache based on the key if

the query does not find a match. On the contrary, Kanefsky teaches "a processing

system for performing an operation on a hierarchical data tree"(See paragraph [0067-

0074, fig. 4&5]), comprising;

"means for retrieving data from an anchor node in the tree and plurality of neighboring

nodes affected by the operation" (See paragraph [0020, 0067-0068])

"means for querying a cache for key representative of the node and the plurality of

neighboring nodes based on the retrieved data" (See paragraph [0021-0022])

"means for performing the operation on the retrieved data to generate post-operation

data, replacing the retrieved data with the post-operation data and storing the post-

operation data in the cache based on the key if the query does not find a match" (See

paragraph[0021-0022, 0038]). Kanefsky's teachings include hierarchy of folders 420-

428, wherein selecting a folder, directs the user to other folders, also a users respond

to the script 628 evokes a second operation such as providing customers with a

number of other option. Kanefsky's teachings also include the retrieval of data such as

automobile dealer, which is displayed when the a user selects an automobile item

from the second folder, which in turn brings up all the other related automobile folders

connected or neighboring folders to the second folder. Kanefsky also teaches at

paragraphs 0021-0022 the means for querying a cache for key representative of the

node and the plurality of neighboring nodes based on the retrieved data an also at

paragraphs 0021-0022, 0038 Kanefsky teaches the means for performing the operation

on the retrieved data to generate post-operation data, replacing the retrieved data with

the post-operation data and storing the post-operation data in the cache based on the

key if the query does not find a match, thus teachings are synonymous.

As per claim 39, applicant argued that Kanefsky does not teaches "a program product

comprising; a computer-readable storage medium; means recorded on a medium for

retrieving data from an anchor node in a hierarchical data tree and plurality of

neighboring nodes affected by an operation to be performed on the tree, means

recorded on a medium for querying a cache for key representative of the node and the

plurality of neighboring nodes based on the retrieved data, means recorded on a

medium for performing the operation on the retrieved data to generate post-operation

data, replacing the retrieved data with the post-operation data and storing the post-operation data in the cache based on the key if the query does not find a match. On the contrary Kanefsky teaches "a program product comprising; a computer-readable storage medium "means recorded on a medium for retrieving data from an anchor node in a hierarchical data tree and plurality of neighboring nodes affected by an operation to be performed on the tree" (See paragraph [0020, 0067-0068])

"means recorded on a medium for querying a cache for key representative of the node and the plurality of neighboring nodes based on the retrieved data" (See paragraph [0021-0022])

"means recorded on a medium for performing the operation on the retrieved data to generate post-operation data, replacing the retrieved data with the post-operation data and storing the post-operation data in the cache based on the key if the query does not find a match" (See paragraph[0021-0022, 0038]). Kanefsky's teachings include hierarchy of folders 420-428, wherein selecting a folder, directs the user to other folders, also a users respond to the script 628 evokes a second operation such as providing customers with a number of other option. Kanefsky's teachings also include the retrieval of data such as automobile dealer, which is displayed when the a user selects an automobile item from the second folder, which in turn brings up all the other related automobile folders connected or neighboring folders to the second folder. Kanefsky also teaches at paragraphs 0021-0022 means recorded on a medium for querying a cache for key representative of the node and the plurality of neighboring nodes based on the retrieved data, and at paragraphs 0021-0022 and 0038, means

recorded on a medium for performing the operation on the retrieved data to generate

post-operation data, replacing the retrieved data with the post-operation data and

storing the post-operation data in the cache based on the key if the query does not find

a match, thus teachings are synonymous.

For claim 54, Kanefsky teaches "a method for performing an operation on a

hierarchical data tree comprising: visiting an anchor node in the tree, retrieving data

from the anchor node and a plurality of neighboring nodes each potentially affected by

the operation, querying a cache for a key representing the anchor node and the

plurality of neighboring nodes based on the retrieved data, if the *query* finds a match,

replacing the pre-operation retrieved data with cached data and if the query does not

find a match, performing the operation on the retrieved data to generate post-

operation data, replacing the retrieved data with the post-operation data and storing

the post-operation data in the cache based key. On the contrary Kanefsky teaches "a

method for performing an operation on a hierarchical data tree (See paragraph [0067-

0074, fig. 4&5]), comprising: visiting an anchor node in the tree" (See paragraph

[0067-0068, fig. 4]);

"retrieving data from the anchor node and a plurality of neighboring nodes each

potentially affected by the operation"(See paragraph [0020, 0067-0068, fig. 4,5&6]);

"querying a cache for a key representing the anchor node and the plurality of

neighboring nodes based on the retrieved data" (See paragraph [0020-0023,0032-

0035])

"if the *query* finds a match, replacing the pre-operation retrieved data with cached

data " (See paragraph [0021-0022]); and

"if the query does not find a match, performing the operation on the retrieved data to

generate post-operation data, replacing the retrieved data with the post-operation data

and storing the post-operation data in the cache based key"(See paragraph [0021-

0022, 0038]). Kanefsky's teachings include hierarchy of folders 420-428, wherein

selecting a folder, directs the user to other folders, also a users respond to the script

628 evokes a second operation such as providing customers with a number of other

option. Kanefsky's teachings also include the retrieval of data such as automobile

dealer, which is displayed when the a user selects an automobile item from the

second folder, which in turn brings up all the other related automobile folders

connected or neighboring folders to the second folder. Kanefsky also teaches at

paragraphs 0020-0023,0032-0035 querying a cache for a key representing the anchor

node and the plurality of neighboring nodes based on the retrieved data and at

paragraphs 0021-0022, if the *query* finds a match, replacing the pre-operation

retrieved data with cached data and at paragraphs 0021-0022, 0038, if the query does

not find a match, performing the operation on the retrieved data to generate post-

operation data, replacing the retrieved data with the post-operation data and storing

the post-operation data in the cache based key, thus teachings are synonymous.

As per claim 7-10, 24-26, 36-38 and 48-50, examiner is not persuaded. In responses to

applicant's argument's that Kanefsky is nonanalogous art, it has been held that a prior

art reference must either be in the field of applicant's endeavors or, if not, then be

reasonably pertinent to the particular problem with which the applicant was concerned,

in order to be relied upon as a basis for rejection of the claimed invention. See In re

Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992).

In this case, the rejection of dependent claims 7-10, 24-26, 36-38 and 48-50 under 35

USC 103(a) as being unpatentable over Kanefsky in combination with Hsiung is

accurate. However, it would have been obvious to one of ordinary skill in the art at the

time of the invention to combine Kanefsky's teachings of anchor nodes and a plurality

of neighboring nodes (0020, 0067-0074) with the teachings of Hsiung using sensors to

monitor process parameters such as temperature, pressure, stress and the like.

Whereby displays can generally outputs signals such as temperature in a graphical

user interface form or numerical value in Celsius (Col. 1-2). To conclude Hsiung also

teaches tree represents a microelectronic device(Co. 15, lines 16-20). Hence, the

applicant's reason for not combining is not analogous. Therefore, examiner maintains

the 35 USC 103(a) rejection.

As per claim 15-20, examiner is not persuaded. In responses to applicant's argument's

that Kanefsky is nonanalogous art, it has been held that a prior art reference must either

be in the field of applicant's endeavors or, if not, then be reasonably pertinent to the

particular problem with which the applicant was concerned, in order to be relied upon as

a basis for rejection of the claimed invention. See In re Oetiker, 977 F.2d 1443, 24

USPQ2d 1443 (Fed. Cir. 1992).

In this case, the rejection of dependent claims 15-20 under 35 USC 103(a) as being

unpatentable over Kanefsky in combination with Schreiber is accurate. However,

Schreiber teaches "wherein the tree is an X-dimensional tree and the plurality of

neighboring nodes includes at least X neighboring nodes". (multi-dimensional...three-

dimensional cube see Schreiber fig. 7[sheet 5of 21] &fig.8B (sheet 6 of 21) &

paragraph 0102-0103 & 0107-0110 &0016).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of

the invention to modify Kanefsky's teachings by Schreiber, because using the

arrangement of nodes with the combination of the tree having a X-dimensional region,

would have given those skilled in the art the skills to effectively incorporate two/three/

X-dimensional region in a directed acyclic graph structure. Hence, the applicant's

reason for not combining is not analogous. Therefore, examiner maintains the 35 USC

103(a) rejection.

As per claim 11-14, examiner is not persuaded. In responses to applicant's argument's

that Kanefsky is nonanalogous art, it has been held that a prior art reference must either

be in the field of applicant's endeavors or, if not, then be reasonably pertinent to the

particular problem with which the applicant was concerned, in order to be relied upon as

a basis for rejection of the claimed invention. See In re Oetiker, 977 F.2d 1443, 24

USPQ2d 1443 (Fed. Cir. 1992).

In this case, the rejection of dependent claims 11-14 under 35 USC 103(a) as being

unpatentable over Kanefsky in combination with Schreiber and Hsiung is accurate.

However Hsiung teaches "wherein the parameter is an equivalence class" (Col. 2, lines50-57, Col. 3, lines 14-31, Col. 13, lines 49-67, Col. 14, lines 1-25, Col 14, lines 27-39, Col. 15, lines 9-20)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Kanefsky and Schreiber by the teachings of Hsiung above, because using the enhanced method and system of an arrangement of nodes in forming a directed acyclic graph with the representation of material composition of Hsiung would have given those skilled in the art the steps to effectively incorporate a material composition to the arrangement of nodes in forming a directed acyclic graph. Hence, the applicant's reason for not combining is not analogous. Therefore, examiner maintains the 35 USC 103(a) rejection.

CONCLUSION

12.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to OLUBUSOLA ONI whose telephone number is 571-272-

2738. The examiner can normally be reached on 7.30-5.00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, TIM VO can be reached on 571-272-3642. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

Customer Service Representative or access to the automated information system, call

800-786-9199 (IN USA OR CANADA) or 571-272-1000.

OLUBUSOLA ONI

Examiner

KHANH B. PHAM
PRIMARY EXAMINER

Art Unit 2168